3 REGULATORY APPLICABILITY

As shown in Section 2, the facility's PTE is less than 50 TPY for all criteria air pollutants and less than 10 TPY for HAP. Therefore, the facility is not a "major source" with respect to Nonattainment New Source Review (NNSR) regulations, Prevention of Significant Deterioration (PSD) regulations, Title V Operating Permit regulations, or National Emissions Standards for Hazardous Air Pollutants (NESHAP). In accordance with PART Env-A 607, this project is required to obtain a Temporary Permit prior to construction because it involves a gas-fired combustion turbine with a heat input rate greater than 10 MMBtu/hr, and that unit is also subject to Federal New Source Performance Standards (NSPS).

The applicability of other regulatory requirements is discussed in more detail below. Section 4 of this application addresses the permit requirements regarding dispersion modeling; permit application forms are included in Appendix A.

3.1 Federal Regulations

This section discusses the applicability and compliance of applicable federal regulations for turbines (3.1.1) and emergency engines (3.1.2, 3.1.3).

3.1.1 New Source Performance Standards for Turbines

As a new combustion turbine with a heat input rate greater than 10 MMBtu/hr commencing construction after February 18, 2005, the Solar Centaur is subject to Federal New Source Performance Standards (NSPS) at 40 CFR 60 Subpart KKKK (and therefore exempt from NSPS Subpart GG requirements, as per §60.4305(b)). Subpart KKKK requirements depend upon the turbine's heat input rate for peak load at ISO conditions (T = 288 K, 60% relative humidity, and P = 101.3 kPa). In the case of this turbine, the peak load heat input rate at ISO conditions is just over 50 MMBtu/hr (HHV), and therefore Subpart KKKK requires that it meets a NO_x emission standard of 25 ppm @ 15% O_2, or 150 ng/J (1.2 lb/MWh) of useful output. As discussed in Section 2, Solar guarantees that the turbine will meet this standard.

Subpart KKKK also requires that the turbine emit no more than 110 ng/J (0.90 lb/MWh) (gross) SO_2, or burn fuels that contain potential SO_2 emissions in excess of 26 ng/J (0.060 lb/MMBtu) heat input. As shown in Section 2, the SO_2 emission factor published by the EPA in AP-42, Table 3.12a, 4/00 identified 0.0034 lb/MMBtu (HHV) for turbines firing pipeline quality natural gas. The turbine heat rate ranges from 9,315 Btu/hp-hr (HHV) at 0 °F to 9,896 Btu/hp-hr (HHV) at 80 °F and even using the higher heat rate, the emission factor is significantly less than the allowable 0.060 lb/MMBtu; therefore the exclusive firing of natural gas will ensure compliance with Subpart KKKK.

3.1.2 National Emissions Standards for Hazardous Air Pollutants for Turbines

On March 5, 2004, the EPA promulgated 40 CFR 63 Subpart YYYY to regulate hazardous air pollutant (HAP) emissions from stationary combustion turbines located a major source of HAP emissions. On August 18, 2004 EPA stayed the effectiveness of this regulation for lean premix gas-fired and diffusion

flame gas-fired stationary combustion turbines. The proposed facility is not a major source of HAP, therefore is not subject to this rule.

3.1.3 New Source Performance Standards for Emergency Engines

On December 20, 2007, the US EPA finalized the NSPS for SI engines (Subpart JJJJ). The subpart provides exhaust emission limitations for owners and operators of stationary emergency engines greater than or equal to 130 hp, manufactured after January 1, 2009. The prescribed exhaust emission limits are 2.0 g NO_x/hp-hr, 4.0 g CO/hp-hr, and 1.0 g VOC/hp-hr. The exhaust limits can also be expressed in terms of pollutant concentration; 160 ppmvd NO_x @ 15% O_2, 540 ppmvd CO @ 15% O_2, and 86 ppmvd VOC @ 15% O_2. TGP has not yet completed the design selection for the emergency generator, however, it is expected that the maximum horsepower capacity for such generator will not exceed 425 hp and operation of this unit will be on an emergency and/or standby basis. TGP is aware of the requirements under Subpart JJJJ and will comply with these emissions limits.

3.1.4 National Emissions Standards for Hazardous Air Pollutants for Emergency Engines

NESHAP Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from a stationary reciprocating internal combustion engine (RICE) located at major and area sources of HAP emissions. The facility's PTE is less than 10 TPY for HAP, which classifies it as an area source. On December 20, 2007, EPA posted a final rule for NESHAP Subpart ZZZZ stating that a new RICE located at an area source, such as the facility's emergency generator, would meet the requirements of this Subpart by meeting the applicable provisions under NSPS 40 CFR part 60 subpart JJJJ (see Section 3.1.3). Therefore, if the facility's emergency generator meets its NSPS emissions standards, no further requirements apply under NESHAP.

3.2 State Regulations

This section discusses the applicability and compliance of potentially applicable state regulations.

3.2.1 PART Env-A 606: Air Pollution Dispersion Modeling Impact Analysis

Env-A 606 requires that a dispersion modeling analysis be conducted for almost any permit application. As stated previously, this analysis has been included in Section 4 of this application.

3.2.2 PART Env-A 608: State Permits to Operate

In accordance with Env-A 608, this facility will be required to apply for a state permit to operate at least 90 days prior to the expiration date of its temporary permit.

3.2.3 PART Env-A 610: General State Permits

New Hampshire has developed a General State Permit for emergency engines which the proposed emergency generator would qualify for approval. However, the facility has opted to submit this Temporary Permit Application seeking authorization for the proposed emergency generator.

3.2.4 *PART Env-A 1211: RACT for Sources of Oxides of Nitrogen (NO_x)*

Because the turbine has a heat input rate larger than 25 MMBtu/hr, it is subject to the requirements of Env-A 1211.06(d), which identifies an emissions standard of 25 ppmvd @ 15% O_2 or 0.092 lb/MMBtu. As discussed in Section 2, Solar guarantees that the turbine will meet this standard.

Because the facility-wide potential to emit is less than 50 TPY, Env-A 1211 requirements do not apply to the emergency engine, as per Env-A 1211.01(j).

3.2.5 *PART Env-A 1400: Toxic Air Pollutants*

The sources at the proposed facility combust natural gas and are therefore exempt from Env-A 1400 as per 1402.01(b) (4).

3.2.6 *PART Env-A 1600: Fuel Specifications*

Fuel specifications in Env-A 1600 only apply to liquid and solid fuels. The sources at the proposed facility combust natural gas, which is not subject to any rules in Env-A 1600.

3.2.7 *PART Env-A 2002: Particulate Matter/Opacity*

Env-A 2002 requires that new fuel-burning devices not cause or allow average opacity to be in excess of 20% for any continuous 6-minute period, except that average opacity is allowed to be in excess of 20% for one period of 6 continuous minutes in any 60-minute period under certain circumstances. In addition, for fuel burning units with heat input rates below 100 MMBtu/hr, Env-A 2002.08 requires that particulate emissions be approximately 0.30 lb/MMBtu. As shown in Section 2, the turbine and emergency engine easily meet this requirement.